

APPENDIX E:

WILDLIFE MONITORING AND PROTECTION PLAN

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**WILDLIFE MONITORING AND PROTECTION PLAN
ATLANTIC RIM NATURAL GAS EIS**

**U.S. Bureau of Land Management
Rawlins Field Office
Rawlins, Wyoming**

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APPENDIX E – WILDLIFE MONITORING AND PROTECTION PLAN

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1.0 INTRODUCTION

This wildlife monitoring/protection plan was prepared in conjunction with the environmental impact statement (EIS) for the Atlantic Rim Natural Gas Project (ARNG). The goal of the plan is to avoid and/or minimize adverse impacts to wildlife present on project-affected areas by monitoring wildlife population trends on the ARNG during the course of project development and operations and by developing appropriate mitigation actions. Implementation of the plan will allow land managers and project personnel opportunities to achieve and maintain desired levels of wildlife productivity and populations on the ARNG (e.g., at pre-project levels) by minimizing and/or avoiding potential adverse impacts to wildlife species. In addition, the implementation of this plan will facilitate the maintenance of a diverse assemblage of wildlife populations on the ARNG simultaneously with development of natural gas reserves.

Proposed inventory, monitoring, and protection measures will be implemented under each potential development scenario. Implementation of the plan will begin in 2006, and is estimated to continue for the life of the EIS; however, the plan may be terminated at the end of any year when there is sufficient evidence that wildlife populations and productivity in the ARNG have been successfully protected. The plan will receive a major review for effectiveness every 5 to 6 years or as determined by the Review Team.

2.0 IMPLEMENTATION PROTOCOL

This section provides preliminary wildlife inventory, monitoring, and protection protocol. A summary of primary protocol components is provided in Table 1. Standard protocol for Application for Permit to Drill (APD) and right-of-way (ROW) application field reviews are provided in Table 2. Alternative protocols likely will be developed in the future in response to specific needs identified in annual reports (Section 2.1.1). Methods are provided for each wildlife species/category, and additional species/categories may be added based on needs identified in annual reports. The wildlife species/categories for which specific inventory, monitoring, and protection procedures will be applied were developed based on management agency (Bureau of Land Management [BLM], U.S. Fish and Wildlife Service [USFWS], Wyoming Game and Fish Department [WGFD]) and individual concerns identified during the preparation of the EIS.

Considerable efforts will be required by agency and operator personnel for plan implementation. Many of the annually proposed agency data collection activities are consistent with current agency requirements. Additionally, during annual planning (Section 2.1.2) and throughout project implementation, all efforts will be made to accommodate agency personnel schedules and responsibilities, and further agency cost-sharing approaches will be considered such that public demands and statutory directives are achieved.

2.1 ANNUAL REPORTS AND MEETINGS

2.1.1 Reports

During project development, operators will provide an updated inventory and description of all existing project features (i.e., location, size, and associated level of human activity at each feature), as well as those tentatively proposed for development during the next 12 months in a format that is

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compatible with a Geographic Information System (GIS). This inventory will be submitted to the BLM by operators no later than October 15 of each calendar year. These data will be coupled with annual wildlife inventory, monitoring, and protection data obtained for the previous year and included in annual reports. Annual reports will be prepared by the operators' third party contractor with BLM oversight. Annual wildlife inventory, monitoring and protection data gathered in conjunction with the project will be provided to the BLM by October 15 of each calendar year.

Annual reports will summarize annual wildlife inventory and monitoring results, note any trends across years, identify and assess protection measures implemented during past years, specify monitoring and protection measures proposed for the upcoming year, recommend modifications to the existing wildlife monitoring/protection plan based on the successes and/or failures of past years and identify additional species/categories to be monitored. Where possible, the data presented in reports will be used to identify potential correlations between development and wildlife productivity and/or abundance, as well as, sources of potential disturbance to wildlife. A GIS will be used for information storage, retrieval, planning, and annual GIS data updates will be conducted. Raw data collected each year also will be provided to other management agencies, at the request of the agencies.

Annual reports will be completed in draft and submitted to the BLM, operators and other interested parties by November 15 of each year. A final annual report will be issued to all potentially affected individuals and groups by early February of each year. Additional reports may be prepared in any year, as necessary, to comply with other relevant wildlife laws, rules, and regulations.

2.1.2 Meetings

A one day meeting will be organized by the BLM and held in December (or as determined by the Review Team) of each year to discuss and modify, as necessary, proposed wildlife inventory, monitoring and protection protocol for the subsequent year. Decisions regarding annual operator-specific financing and personnel requirements will be made at these meetings. A protocol regarding how to accommodate previously unidentified development sites will also be determined during the annual meeting. Final decisions will be made by the BLM based on the input of all affected parties.

Additional meetings may be held in any given year to inform and update cooperators on the findings of additional reports, as necessary.

2.2 ANNUAL INVENTORY AND MONITORING

Inventory and monitoring protocols will be as identified below for each wildlife species/category. These protocols will be unchanged across development alternatives, except as authorized by the BLM or specified in this plan. Additional wildlife species/categories and associated surveys may be added or wildlife species/categories and surveys may be omitted in future years, pending results presented in the coordinated review of annual reports. Opportunistic wildlife observations may be made throughout the year by agency and operator personnel present in the project area.

The frequency of inventory and monitoring will be dependent upon the level of development in the project area. In general, inventory and monitoring frequency will increase with increased levels of development. Inventory and monitoring results may lead to further, currently unidentifiable, scientific studies specifically designed to determine cause and effect. The review team and/or BLM will identify the level of effort required by this wildlife plan subject to the standard listed below. Site-

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and species-specific surveys will be conducted in association with APD and ROW application field reviews.

2.2.1 Threatened, Endangered, Candidate, and Other Species of Concern

The level of inventory/monitoring required for threatened, endangered, candidate, and other species of concern (TEC&SC) will be commensurate with established protocols for the potentially affected species. All surveys will be conducted in coordination with the BLM. Methodologies and results of these surveys will be included in annual reports and provided in separate supplemental reports. A preliminary list of TEC&SC species proposed for management and known from or potentially occurring in the vicinity of the project area is shown Chapter 3. As TEC&SC species are added to or withdrawn from USFWS, BLM, and/or WGFD lists, appropriate modifications will be incorporated to this plan and specified in annual reports.

TEC&SC data collected during surveys and described below will be provided only as necessary to those requiring the data for specific management and/or project development needs. Site- and species-specific TEC&SC surveys will be conducted as necessary in association with all APD and ROW application field reviews.

2.2.1.1 Black-footed Ferret

The USFWS, in coordination with the WGFD, has developed a list of habitat blocks that are not likely to be inhabited by black-footed ferrets (block cleared). In these areas, take of individual ferrets and effects to a wild population are not an issue and surveys for ferrets are no longer recommended. Although ferret surveys are not required in these areas, the area may still maintain value for the survival and recovery of the species in the future. Additionally, areas remain that require ferret surveys (non-block cleared) in potential habitat. A portion of the project area coincides with the Dad complex, which is a non-block cleared area, requiring ferret surveys in areas that would likely result in the take of a ferret during project implementation.

BLM biologists will determine the presence/absence of prairie dog colonies at each proposed development site during APD and ROW application field reviews. Prairie dog colonies in the project area will be mapped and burrow densities determined by a BLM-approved operator-financed biologist, as necessary and in association with proposed development plans. Colonies that meet USFWS criteria as potential black-footed ferret habitat (USFWS 1989), in non-block cleared areas, will be surveyed for black-footed ferrets by an USFWS-certified operator-financed surveyor prior to BLM authorizing disturbance of these colonies. Surveys will be conducted as deemed necessary, during consultation with the BLM and/or USFWS. Black-footed ferret surveys will be conducted in accordance with USFWS guidelines (USFWS 1989) and approved by BLM and USFWS.

2.2.1.2 Bald Eagle, Peregrine Falcon, and Ferruginous Hawk

Inventory and monitoring protocol for bald eagle, peregrine falcon, and ferruginous hawk will be as described for raptors (Section 2.2.1).

2.2.1.3 Greater Sage-Grouse & Columbian Sharp-Tailed Grouse

Greater sage-grouse/Columbian sharp-tailed grouse lek inventories will be conducted by the BLM and Wyoming Game & Fish Department on the project area and a two mile/one mile buffer to determine lek locations every 5 years, or as deemed appropriate by the BLM. Surveys may be

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conducted aerially, with operator-provided financial assistance for aircraft rental, or on the ground, in order to determine lek locations.

Selected leks within two miles/one mile of existing and proposed disturbance areas will be monitored annually to determine lek attendance by the BLM or a BLM-approved operator-financed biologist, between March 1 and May 15, such that all leks on these areas are monitored at least once every 3 years. Monitoring efforts will be implemented at all leks present on affected sections, two mile buffers, and selected undeveloped comparison areas. The BLM will direct lek monitoring efforts such that efforts are made to have the same individuals monitor the same leks within and across years. Data collected during these surveys will be provided on a standardized form. Standard site- and species-specific grouse lek surveys will be conducted as necessary in association with all APD and ROW application field reviews.

2.2.1.4 Mountain Plover

Mountain plover habitat will be mapped within proposed disturbance areas (as identified in annual reports) prior to development of these areas by the BLM or a BLM-approved operator-financed biologist. In addition, these areas will be surveyed annually by the BLM or a BLM-approved operator-financed biologist to detect the presence of plovers. Surveys will be conducted during the period of May 1 through June 30. Data collected during these surveys will be provided on mountain plover route survey forms. Standard site-specific habitat surveys will be conducted as necessary in association with all APD and ROW application field reviews.

2.2.1.5 Western Burrowing Owl

Prairie dog colonies and other suitable burrowing owl nesting areas on and within 0.75 miles of existing and proposed disturbance areas will be searched for western burrowing owls by the BLM or a during June through August to determine the presence or absence of nesting owls. If burrowing owls are found, attempts will be made to determine reproductive success. Standard site-specific surveys will be conducted in association with all APD and ROW application field reviews.

2.2.1.6 Other TEC&SC Species

Surveys for other TEC&SC species will be conducted by the BLM or a BLM-approved operator-financed biologist in areas of potential habitat within 0.5 mile of proposed disturbance sites prior to disturbance. These surveys may be implemented in conjunction with surveys for other species or as components of APD and/or ROW application processes. If any TEC&SC species are observed, the observations will be noted on appropriate data forms and efforts will be made to determine their activities (e.g., breeding, nesting, foraging, hunting, etc.). If any management agency identifies a potential for concern regarding any of these species, additional inventory and monitoring and mitigation may be implemented as specified in annual reports.

2.2.2 Raptors

Raptor inventories will be conducted by the BLM, at least every five years or prior to development of proposed disturbance areas (as identified in annual reports), to determine the location of raptor nests. Raptor nest monitoring will be conducted by the BLM or a BLM approved operator-financed biologist, annually, at known nest locations, between April and July, in order to ascertain nest activity status. These surveys may be implemented aerially, via helicopter, or from the ground. Operators may provide financial assistance for aircraft rental.

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Nest productivity monitoring will be conducted by the BLM at active nests, for selected species, to determine nesting success. Monitoring generally will be conducted from the ground, and attempts will be made to determine the cause of any documented nest failure. Operators may provide financial assistance for aircraft rental, as necessary. Site- and species-specific raptor nest inventories will be conducted as necessary in association with all APD and ROW application field reviews.

All raptor nest/productivity surveys will be conducted using procedures that minimize potential adverse effects to nesting raptors. Specific survey measures for reducing detrimental effects are listed in Grier and Fyfe (1987) and Call (1978) and include the following.

- Nest visits will be delayed for as long as possible in the nesting season.
- Nests will be approached cautiously, and their status (i.e., number of nestlings/fledglings) will be determined from a distance with binoculars or a spotting scope.
- Nests will be approached tangentially and in an obvious manner to avoid startling adults.
- Nests will not be visited during adverse weather conditions (e.g., extreme cold, precipitation events, windy periods, and hottest part of the day).
- Visits will be kept as brief as possible.
- All inventories will be coordinated by the BLM.
- The number of nest visits in any year will be kept to a minimum.
- All raptor nest location data will be considered confidential.

2.2.3 Big Game Crucial Winter Range

Data on big game use of crucial winter ranges on the project area and an adjacent one mile buffer will be requested annually by the BLM from the WGFD, as deemed necessary by the BLM. This information will be used to assess the effectiveness of protection measures implemented for the project.

2.2.4 Other Inventory and Monitoring Measures

Additional inventory and monitoring measures may be applied for other species as specified in annual reports. Surveys will be conducted in adherence with protocol to be established by the BLM, other agencies and operators. Operators may provide financial assistance for these investigations.

2.2.5 General Wildlife

BLM staff will be responsible for maintaining records of selected wildlife species observed during the course of their activities on the project area. Operator personnel may also provide data on wildlife observations. The information provided will include observations of wildlife species, their numbers, location, activity, and other pertinent data as applicable and identified on the General Wildlife Observation Data Sheet. Where operators are uncertain of the USGS coordinates for an observation, a general description of the location may be provided and in instances where species or sex information is questionable, operators will identify the observation as such.

2.3 PROTECTION MEASURES

The wildlife protection measures proposed herein have been developed from past measures identified for oil and gas developments in Wyoming. Additional measures may be included and/or

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existing measures may be modified in any given year as allowable and as deemed appropriate by BLM in consultation with other agencies, operators and interested parties. These measures will be specified in annual reports. Protection measures will be implemented by operators with assistance from and/or in consultation with the BLM. In addition, these measures may be modified on a site-specific basis as deemed appropriate by the BLM after completion of APD and ROW application field reviews.

The principal protection measure for most wildlife will be species- and project-specific measures as well as general wildlife protection measures (Section 2.3.4). Implementation of these measures may benefit other wildlife species found on and adjacent to the project area. Sensitive/crucial habitats should be avoided where possible.

2.3.1 TEC&SC

USFWS and WGFD consultation and coordination will be conducted for all protection activities relating to TEC&SC species and their habitats. Where possible, these actions will be specified in advance in the annual reports.

2.3.1.1 Black-footed Ferret

In general, all prairie dog colonies on the project area will be avoided, where practical. If prairie dog colonies, in non-block cleared areas, of sufficient size and burrow density for black-footed ferrets are scheduled to be disturbed, black-footed ferret surveys of these colonies will be conducted pursuant to BLM and/or USFWS decisions made during informal consultations. Survey protocol will adhere to USFWS guidelines as established in USFWS (1989) and will be conducted by a USFWS-qualified biologist a maximum of one year in advance of the proposed disturbance. Reports identifying survey methods and results will be prepared and submitted to the USFWS and BLM in accordance with Section 7 of the *Endangered Species Act of 1973*, as amended, and the Interagency Cooperation Regulations. Surveys will be financed by the operators.

If black-footed ferrets are found on the project area, the USFWS will be notified immediately and formal consultations will be initiated to develop strategies that ensure no adverse effects to the species. Before ground-disturbing activities are initiated in black-footed ferret habitat, authorizations to proceed must be received from the BLM, in consultation with the USFWS.

2.3.1.2 Bald Eagle, Peregrine Falcon, and Ferruginous Hawk

Protection protocol will be as described for raptors (see Section 2.3.1). Additional measures will be applied on a species- or site-specific basis, as deemed appropriate by the BLM and/or USFWS, and specified in annual reports.

2.3.1.3 Greater Sage-Grouse & Columbian Sharp-Tailed Grouse

Surface disturbance or occupancy will be prohibited within 0.25 miles of the perimeter of occupied leks; Human activity would be avoided between 6:00 p.m. and 9:00 a.m. from March 1 to May 20 within 0.25 miles of the perimeter of occupied leks; Surface disturbance and other actions that create permanent and high-profile structures such as buildings, storage tanks and overhead power lines, will not be constructed within 0.25 to 1.0 mile of the perimeter of leks, as determined on a case-by-case basis; Surface disturbing and disruptive activities will not be allowed within two miles of an occupied greater sage-grouse lek or in nesting and early brood-rearing habitat associated with

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individual leks (when identified and delineated), from March 1 to July 15; Surface disturbing and disruptive activities will not be allowed within one mile of an occupied Columbian sharp-tailed grouse lek or in nesting and early brood-rearing habitat associated with individual leks (when identified and delineated), from March 1 to July 15; Surface disturbing and disruptive activities will not be allowed between November 15 and March 14 in delineated winter concentration areas; and, in order to minimize noise disturbances to strutting or dancing grouse, compressor stations and generators will be muffled with hospital style mufflers. Other techniques and/or equipment can be utilized, when it is demonstrated that they result in similar or increased noise reduction. Additional noise reduction techniques may be required if research shows that current techniques are not adequate.

2.3.1.4 Mountain Plover

Mountain plover habitat will be avoided where practical. Where these habitats will be disturbed, reclamation will utilize procedures designed to reestablish suitable plover habitat. The primary protection measure for mountain plover on the project area will be avoidance plover habitat during the breeding season. All surface-disturbing activities will be restricted from April 10 to July 10 in mountain plover habitat. Additional protection measures, as shown below, may be implemented in identified mountain plover occupied habitat (i.e., areas where broods and/or adults have been observed in the current year or documented in at least 2 of the past 3 years). Surface disturbance would occur outside identified occupied habitat for mountain plovers where feasible.

- Within ½ mile of the identified mountain plover occupied habitat area; speed limits would be posted at 25 mph on resource roads and 35 mph on local roads during the brood rearing period (June 1 - July 10).
- The access road would be realigned to avoid the identified mountain plover occupied habitat area.
- To protect mountain plover in occupied habitat, traffic would be minimized from June 1 - July 10 by car-pooling and organizing work activities to minimize trips on roads through the mountain plover occupied habitat area.
- To protect mountain plover in occupied habitat, fences, storage tanks, and other elevated structures would be either constructed as low as possible and/or would incorporate perch-inhibitors into their design.
- To minimize destruction of nests and disturbance to breeding mountain plovers, no ground-disturbing activities would occur from April 10 - July 10 unless surveys consistent with the Plover Guidelines or other FWS approved method find that no plovers are nesting in the area.
- A plugged and abandoned well within ½ mile of the identified mountain plover occupied habitat area would be identified with a marker 4 feet tall with a perch inhibitor on the top of the marker.

2.3.1.5 Western Burrowing Owl

Protection protocol will be as described for raptors (Section 2.3.1) as well as avoidance of prairie dog colonies, where practical (Section 2.3.2.1).

2.3.1.6 Other TEC&SC Species

If crucial features for any TEC&SC species are found during surveys of areas within 0.5 miles of proposed disturbance sites, avoidance of these features will be accomplished in consultation and

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coordination with the BLM, USFWS, and WGFD. Construction activities in these areas will be curtailed until there is concurrence between BLM, USFWS, and WGFD on what activities can be authorized. Activities will, in most cases, be delayed until such time that no adverse effects will occur.

It is assumed that the protocol specified in Section 2.3.4 for general wildlife will likely benefit TEC&SC species as well. If any management agency identifies a potential for impacts to any TEC&SC species, additional measures may be implemented as specified in annual reports.

2.3.2 Raptors

The primary protection measure for raptor species on the project area will be avoidance of nest locations during the breeding season. All surface-disturbing activities will be restricted from February 1 through September 15 within a 0.75 to 1.0 mile radius of raptor nests, depending upon species. In addition, well locations, roads, ancillary facilities, and other surface structures requiring a repeated human presence will not be constructed within 825 feet of raptor nests, except ferruginous hawk, where the restriction will be 1,200 feet (restrictions will generally exclude surface disturbance).

Operators will notify the BLM immediately if raptors are found nesting on or within 1,200 feet of project facilities, and operators will assist the BLM as necessary in erecting artificial nesting structures (ANSs), as appropriate. The use of ANSs will be considered as a last resort for raptor protection. If nest manipulation or a situation requiring a "taking" of a raptor nest becomes necessary, a special permit will be obtained from the Denver USFWS Office, Permit Section, and will be initiated with sufficient lead time to allow for development of mitigation. Required corresponding permits will be obtained from the WGFD in Cheyenne. Consultation and coordination with the USFWS and WGFD will be conducted for all protection activities relating to raptors.

If it is found that project activities could potentially affect raptor nesting on or adjacent to the project area, as determined from decreased raptor productivity or nesting, or documented nest abandonment or failure, ANSs may be constructed at a rate of up to two ANSs for one impacted nest. Existing degraded raptor nests may be upgraded or reinforced to minimize potential impacts. ANSs will be located within the nesting territory of potentially affected raptor pairs, outside of the line-of-sight or nest buffer of actively nesting pairs, where possible. Operators will be responsible for the annual maintenance of ANSs throughout the LOP. Annual ANS maintenance activities will be completed after August 15 and prior to October 15 each year, as necessary. All ANSs on public lands will become the property of the BLM upon completion of the project. Pertinent data regarding ANSs or nests proposed for upgrading will be identified in annual reports.

In cases where existing project features are located within the nest buffers of active raptor nests, no prolonged maintenance activities will be allowed during critical periods. The exact dates of exclusion will be determined by the BLM and will likely vary between nests and from year to year, depending on the species present and variations in weather, nesting chronology, and other factors.

Any power line construction will follow the recommendations of the Avian Power Line Interaction Committee (APLIC) (1994, 1996) and Olendorff et al. (1981) to avoid collisions and/or electrocution of raptors.

2.3.3 Big Game Species

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No construction activities or prolonged maintenance actions will be conducted within big game crucial winter range during the crucial winter periods of November 15 - April 30. If right-of-way fencing is required, it will be kept to a minimum, and the fences will meet BLM/WGFD approval for facilitating wildlife movement. Wildlife-proof fencing will be used only to enclose areas that are potentially hazardous to wildlife species, or reclaimed areas where it is determined that wildlife species are impeding successful vegetation establishment. Snow fences, if used, will be limited to segments of 0.25 miles or less. Project personnel will also be advised to minimize stopping and exiting their vehicles in big game winter habitat during crucial winter periods. In addition, escape openings will be provided along roads in big game crucial winter ranges, as designated by the BLM, to facilitate exit of big game animals from snowplowed roads. Additional habitat protection/improvement measures may also be applied in any given year as directed by the BLM, in consultation with operators and other agencies, and specified in annual reports.

2.3.4 General Wildlife

Unless otherwise indicated, the following protection measures will be applied for all wildlife species. Additional measures primarily designed to minimize impacts to other resources (e.g., vegetation and surface water resources, including wetlands, steep slopes, etc.) are identified in the EIS in Chapter 4.0, and these measures may provide additional protection for wildlife. Additional actions may be applied in any given year to further minimize potential impacts to wildlife. These actions will be specified in annual reports.

All roads on and adjacent to the project area that are required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions and facilitate wildlife (most notably big game) movement through the project area. Appropriate speed limits will be adhered to on all project roads, and operators will advise employees and contractors regarding these speed limits. Some existing roads on the project area and surrounding transportation planning area may be reclaimed if they become redundant, or closed (gated and locked, year-round or seasonally) to deny unnecessary access.

To protect important habitat in portions of the project area (i.e., ephemeral draws dominated by basin big sagebrush) areas with sagebrush greater than three feet tall will be avoided where possible.

Additional non-species-specific wildlife mitigations include the following.

- Reserve, work-over, and flare pits and other locations potentially hazardous to wildlife will be adequately protected by netting and/or fencing as directed by the BLM to prohibit wildlife access.
- If dead or injured raptors, big game, migratory birds, or unusual wildlife are observed on the project area, operator personnel will contact the appropriate BLM and WGFD offices. Under no circumstances will dead or injured wildlife be approached or handled by operator personnel.
- Employee and contractor education will be conducted regarding wildlife laws. If violations are discovered on the project area, operators will immediately notify the appropriate agency. If the violation is committed by an employee or contractor, said employee or contractor will be disciplined and may be dismissed by the operator and/or prosecuted by the WGFD and/or USFWS.
- Operators will implement policies designed to control off-site activities of operational personnel and littering, and will notify all employees (contract and company) that conviction of a violation can result in disciplinary action, including dismissal.

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Additional project- and site-specific mitigation measures may be added in future years, as specified in annual reports.

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Table 1 Summary of General Wildlife Reporting, Inventory, and Monitoring

| ACTION | DATES | RESPONSIBLE ENTITY |
|--|--|---|
| Annual tentative plan of development | By October 15, annually | Operator |
| Annual inventory, monitoring and protection data | By October 15, annually | |
| Annual reports | Annually: Draft – early November Final – early January | Operator |
| Annual meeting | December and as necessary | BLM with participation by other agencies and operators |
| INVENTORY/ MONITORING | | |
| Raptor nest inventory | At least every five years, prior to development | BLM or BLM approved operator financed biologist with operator provided financial assistance for aircraft rental, as necessary |
| Raptor monitoring | Annually from April to July | BLM or BLM approved operator financed biologist with operator provided financial assistance for aircraft rental, as necessary |
| Greater sage-grouse & Columbian sharp-tailed grouse lek inventory | At least every five years | BLM or BLM approved operator financed biologist with operator provided financial assistance for aircraft rental, as necessary |
| Greater sage-grouse & Columbian sharp-tailed grouse lek monitoring | Annually from March to mid-May | BLM or BLM approved operator financed biologist |
| Big game crucial winter range use/monitoring | As available | BLM will request data from WGFD |
| Mountain Plover surveys | Annually from May to June | BLM or BLM approved operator financed biologist |

APPENDIX E – WILDLIFE MONITORING AND PROTECTION PLAN

Table 2 Summary of General APD/ROW Application Stage Survey/Protection Measures

| PROTECTION MEASURE | DATES | RESPONSIBLE ENTITY |
|--|--|--|
| Raptor nest survey/inventory within 0.75 to 1.0 miles of proposed disturbance | Yearlong | BLM, operator |
| Raptor nest season avoidance within 0.75 to 1.0 miles | February 1 to September 15 | BLM, operator |
| Raptor nest avoidance with 825 feet (1200 feet for ferruginous hawk nests) | Yearlong | BLM, operator |
| TEC&SC surveys | Yearlong, as necessary | BLM, operator |
| TEC&SC avoidance | Yearlong, as necessary | BLM, operator |
| Prairie dog colony mapping | Yearlong, as necessary | BLM, operator |
| Prairie dog colony avoidance | Yearlong, where practical | BLM, operator |
| Black-footed ferret surveys | As appropriate in accordance with USFWS guidelines | Operator financed USFWS-approved biologist |
| Mountain Plover habitat surveys | Yearlong | BLM, operator |
| Mountain plover nest/brood avoidance | April 10 to July 10 | BLM, operator |
| Greater sage-grouse lek/nesting habitat avoidance within 2.0 miles of proposed disturbance; Columbian sharp-tailed grouse lek/nesting habitat avoidance within 1.0 mile of proposed disturbance | March 1 to June 30 | BLM, operator |
| Greater sage-grouse and Columbian sharp-tailed grouse lek avoidance within 0.25 miles of proposed disturbance | Yearlong | BLM, operator |
| Big game crucial winter range avoidance | November 15 to April 30 | BLM, operator |
| General wildlife avoidance/protection | As necessary | BLM, other agencies, operator |